

What is claimed is:

1           1. An electric motor comprising:  
2           a housing having first and second ends;  
3           a rotatable shaft extending through the housing;  
4           a commutator disposed in the housing about the shaft;  
5           a plurality of brushes disposed in the housing and engagable with the  
6           commutator;

7           a bushing mounted in the housing in engagement with the shaft; and  
8           a lubricant recirculation member disposed in the housing about the  
9           shaft between the commutator and the bushing, the lubricant recirculation member in  
10          the form of a body having a unitarily joined first lubricant recirculation and wear  
11          surface portion and a second vibration dampening portion.

1           2. The motor of claim 1 wherein:  
2           the first portion has an internal cavity with a side wall shaped to  
3           recirculate lubricant away from the commutator.

1           3. The motor of claim 1 wherein:  
2           the first and second portions have complementary, mating members  
3           for mechanical interlock of the first and second portions.

1           4. The motor of claim 1 wherein:  
2           the second portion of the body fixedly engages the motor shaft.

1           5. The motor of claim 4 wherein:  
2           the second portion is formed of a thermoplastic elastomer.

1           6. The motor of claim 5 wherein:  
2           the thermoplastic elastomer is a polyether ester copolymer.

1                   7.       The motor of claim 1 further comprising:  
2                   complementary peripheral interlock members formed on the first and  
3                   second portions.

1                   8.       The motor of claim 7 wherein:  
2                   the complementary interlock members include annular radially inward  
3                   and radially outward complementary members on the first and second portions.

1                   9.       The motor of claim 1 further comprising:  
2                   a plurality of circumferentially spaced fingers extending from the first  
3                   portion into a central bore in the second portion, a radially innermost surface of each  
4                   of the plurality of fingers engaging the shaft of the motor to center the lubricant  
5                   recirculation member about the shaft.

1                   10.      The motor of claim 1 wherein:  
2                   the first portion of the body of the lubricant recirculation member is  
3                   formed of molybdenum disulfide filled nylon 6, 6.

1                   11.      The motor of claim 1 wherein the first portion of the body  
2                   further comprises:  
3                   a base having a wear surface contacting the bushing; and  
4                   non-linear sidewalls extending away from the base to direct lubricant  
5                   from the bushing away from the base.